

[1] Wavelength conversion device comprising:

a laser light source for outputting a fundamental wave light,

a nonlinear optical crystal into which said fundamental wave light is made to enter to generate converted light having a wavelength different from the wavelength of said fundamental wave light,

an optical path adjusting portion for adjusting the direction of propagation of said fundamental wave light and the position of the light beam of said fundamental wave light in order to make said fundamental wave light enter said nonlinear optical crystal while satisfying phase matching conditions,

a photodetector for detecting the intensity of said converted light,

an adjustment value calculating means for calculating the adjustment values that respectively correspond to a plurality of adjustment means provided in said optical path adjusting portion, using fuzzy inference, from the value of the intensity of said converted light that is output from said photodetector,

and an optical path adjusting portion control device for controlling a plurality of adjustment means provided in said optical path adjusting portion, based upon said adjustment values calculated in said adjustment value calculating means.